

**PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA**  
**AGENDA ID #15490**  
**ENERGY DIVISION** **RESOLUTION E-4820**  
**March 2, 2017**

**R E S O L U T I O N**

Resolution. Request for Approval of Pacific Gas & Electric, San Diego Gas and Electric, Southern California Edison and Southern California Gas' Assembly Bill 793 (AB 793) Advice Letters (ALs).

**PROPOSED OUTCOME:**

- Approves with modifications Pacific Gas & Electric (PG&E), San Diego Gas and Electric (SDG&E), Southern California Edison (SCE) and Southern California Gas Company's (SoCalGas) proposed AB 793 ALs and requires each of the SIOUs to file a Tier 2 AL to demonstrate compliance with the Commission directed modifications within 30 days of the approval of this Resolution.

**SAFETY CONSIDERATIONS:**

- Energy Management Technologies (EMTs) incentivized by the AB 793 legislation can have several impacts on safety including:
  - The devices may be able to allow customers to detect gas leaks or other harmful appliance malfunctions by monitoring their energy use remotely.
  - The customer may also be able to detect remotely whether an appliance is operating when it should not be and turn it off or control that device's operations.
  - EMTs are often packaged with other devices that monitor security and/or indoor air quality.

**ESTIMATED COST:**

- Actual costs will be determined upon approval of the IOUs AB 793 Compliance Filings.

By supplemental Advice Letters: PG&E filed 3744-G-A/4886-E-A on August 8, 2016; SDG&E filed 2937-E-A/2500-G-A on August 5, 2016; SCE filed 3446-E-A filed on August 9, 2016; and SoCalGas filed 5003-G-A and 5012 on August 11,

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SCE AL 3446-E-A, SCE AL 3446-E-B, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-A.  
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2016. The following partial supplemental ALs were filed on September 20, 2016: PG&E 3744-G-B/4886-E-B, SDG&E 2937-E-B/2500-G-B, SoCalGas 5003-G-B and SoCalGas supplemental AL 5012-A, which included the joint IOU marketing plan. SCE 3446-E-B was filed on September 27, 2016.

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## **SUMMARY**

The AB 793 legislation directed the investor-owned utilities (IOUs) to develop a program in their demand side management portfolios to provide incentives to residential and small and medium business (SMB) customers to acquire (EMTs)<sup>1</sup> by January 1, 2017. AB 793 also required the IOUs to develop a plan by September 30, 2016, to educate residential and SMB customers about incented EMT offerings available to them.

On August 1, 2016 PG&E filed AL 3744-G/4886-E, SDG&E filed AL 2937-E/2500-G, SCE filed AL 3446-E and SoCalGas filed AL 5003-G proposing implementation plans to satisfy the requirements of the AB 793 legislation. IOUs filed five supplemental ALs: PG&E 3744-G-A/4886-E-A filed on August 8, 2016; SDG&E 2937-E-A/2500-G-A filed August 5, 2016; SCE 3446-E-A filed on August 9, 2016; and SoCalGas filed 5003-G-A and 5012 on August 11, 2016. SoCalGas AL 5012 included the joint IOU AB 793 marketing plans.

The following partial supplemental ALs were filed on September 20, 2016: PG&E 3744-G-B/4886-E-B, SDG&E 2937-E-B/2500-G-B, SoCalGas 5003-G-B and SoCalGas supplemental AL 5012-A, which included the joint IOU marketing plan. SCE 3446-E-B was filed on September 27, 2016.

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<sup>1</sup> For the purposes of AB 793, “energy management technology” may include a product, service, or software that allows a customer to better understand and manage electricity or gas use in the their home or place of business.

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SCE AL 3446-E-A, SCE AL 3446-E-B, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-A.  
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**This Resolution approves with modifications the AB 793 ALs and requires each of the IOUs to file a Tier 2 AL to demonstrate compliance with the Commission directed modifications within 30 days of the approval of this Resolution.**

## **BACKGROUND**

AB 793 was signed into law by Governor Brown on October 8, 2015, adding Section 717 to the Public Utilities Code (PUC). The statute requires the Commission to order electric and gas corporations to develop a program no later than January 1, 2017 to provide incentives to residential or SMB customers to acquire EMTs, and to develop a plan to educate these customers about the incentive program by September 30, 2016. Section 717 states:

(a) The commission shall require an electrical or gas corporation to do all of the following pursuant to AB 793:

- (1) Develop a program no later than January 1, 2017, within the electrical or gas corporation's demand-side management programs authorized by the commission, to provide incentives to a residential or small or medium business customer to acquire energy management technology for use in the customer's home or place of business. The electrical or gas corporation may allow third parties or local governments to apply for incentives on behalf of customers. The electrical or gas corporation shall work with third parties, local governments, and other interested parties in developing the program. The electrical or gas corporation shall establish incentive amounts based on savings estimation and baseline policies adopted by the commission.
- (2) Develop a plan by September 30, 2016, to educate residential customers and small and medium business customers about the incentive program developed pursuant to paragraph (1). The commission may require that the plan be integrated into, or coordinated with, any education campaign required by the commission.

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SCE AL 3446-E-A, SCE AL 3446-E-B, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-A.  
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(3) Annually report to the commission on actual customer savings resulting from the incentive program established pursuant to this section. The commission shall evaluate all electrical or gas corporation energy savings claims achieved pursuant to the incentive program in a manner consistent with commission-adopted evaluation protocols and determine if the program shall continue or be modified.

(b) For purposes of this section, 'energy management technology' may include a product, service, or software that allows a customer to better understand and manage electricity or gas use in the customer's home or place of business.

(c) Nothing in this section shall be construed to amend or limit the ability of a community choice aggregator to apply to administer an energy efficiency or conservation program or a demand-side management program as set forth in Section 381.1.

AB 793 also amends Section 2790 of the PUC, expanding the definition of the weatherization services for low-income customers to include EMTs.

A Joint Ruling from the assigned Administrative Law Judges (ALJs) to the energy efficiency (EE) proceeding R.13-11-005 and demand response (DR) proceeding R.13-09-011 required PG&E, SDG&E, SCE and SoCalGas to each file Tier 2 ALs on August 1, 2016, that include proposals to comply with AB 793 that are comprehensive, innovative, and scalable, and that are responsive to the needs of the marketplace. The Joint Ruling identified specific items that should be proposed in each of the IOUs' proposals:

1. Strategies for increasing participation and deployment of current demand-side programs and offerings that meet the Legislation's definition of an energy management technology;
2. A list of all energy management technology programs and offerings that are currently not in the IOU portfolios, but will be rebated and available on January 1, 2017;

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SCE AL 3446-E-A, SCE AL 3446-E-B, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-A.  
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3. A comprehensive list of all energy management technology programs and offerings that meet the objectives of Section 717, but that the IOUs will not plan to launch until after January 1, 2017. For these programs and offerings, the IOUs shall provide timelines for launch and necessary actions to offer the product(s);
4. Information on all energy management technology products that are currently part of the IOU programs or will be part of the programs on January 1, 2017, with associated rebates, budgets, projected uptake, and target market for all programs and offerings;
5. A proposal for a process for reporting and tracking of Section 717 program accomplishments and savings to the Commission;
6. A list of any and all proposals to implement Section 717 which may be executed in cooperation with all regional energy networks, community choice aggregators, and/or publicly-owned utilities; and
7. A robust two-year marketing plan for energy management technologies that includes the following:
  - Strategies to be employed
  - Metrics and targets
  - Partnerships

All of the IOUs timely filed their initial AB 793 ALs, on August 1, 2016 as directed in the Joint Ruling. The IOUs AB 793 filings included:

- Existing products or programs that could be considered EMT offerings
- Proposed EMT offerings for launch by January 1, 2017
- EMT offerings in development for after January 1, 2017
- Joint IOU Marketing Plan and PG&E's Local Market Facilitation Plan
- Evaluation Measurement and Verifications Plans

#### **IOU Proposals in Supplemental AB 793 ALs**

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SCE AL 3446-E-A, SCE AL 3446-E-B, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-A.  
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### PG&E's AB 793 Offerings

PG&E's AB 793 ALs 3744-G/4886-E and supplemental 3744-G-A/4886-E-A include new residential and SMB products and software as a service in the phase 1 roll out for 2016. For the residential sector PG&E plans offer a \$50 rebate to assist customers in acquiring eligible smart thermostats. PG&E also plans to offer the WeatherBug smart thermostat assessment, which is a free service that adjusts thermostat set points using local weather data to optimize customers' energy use. They also plan to offer a randomized control pilot for Nest smart thermostat customers, which also adjusts thermostat set points to optimize customers' energy use and compares participants' usage to Nest customers who don't have the algorithm that adjusts set points.

In addition, PG&E's phase one roll out includes Automated Demand Response (ADR) for the residential sector, which provides incentives and technical assistance for customers to acquire EMTs and enable them to perform demand response (DR). Customers who sign up to participate in ADR will receive automated event signals from PG&E that will initiate pre-programmed DR strategies. PG&E's final phase 1 offering for the residential sector is the Time of Use (TOU) Smart Phone App technology, which will assess customer acceptance of a multi-functional smart phone app that will convey a variety of useful information to TOU participants. This information may include pricing information, TOU-specific performance feedback, and energy-saving tips informed by user-specific end use load disaggregation features to encourage energy savings or load shifting.

For the SMB sector, PG&E plans to offer Bill Forecasts, which are a bill analysis tool that includes a forecast of a customer's bill as early as seven days into the billing cycle, a comparison with the same month's bill from the previous year, and detailed information about what is driving the changes in a customer's bill. Finally, PG&E plans to offer Energy Alerts, which allow SMB customers to set a monthly bill alert amount and get notified when their bill is projected to exceed that amount. Energy Alerts can be sent after the first week of a billing cycle when a customer's energy use is projected to exceed the amount they have specified. Energy Alerts can be delivered via email, text or automated phone

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SCE AL 3446-E-A, SCE AL 3446-E-B, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-A.  
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message based on the customer's preference. These alerts help customers reduce their energy bills by setting goals and avoid high bills through early notification.

### SCE's AB 793 Offerings

SCE's AB 793 ALs 3446-E and supplemental 3446-E-A propose three offerings that would be available beginning January 1, 2017. First SCE proposes a \$50 incentive for the purchase of a qualifying smart thermostat. They also propose offering Tier II Advanced Power Strips, which can detect when a device has gone from operational to idle mode and can then disable the outlet and cut the device's power supply to save on idle loads, to residential and small/medium business customers. Finally, SCE will initiate a behavior points and rewards pilot in which customers will earn points for taking SCE-selected actions such as completing an audit or enrolling in EE programs. The selected customer can exchange earned points for gift cards.

In addition, SCE proposes to launch the following products in 2017. First, SCE proposes a smart plug program to introduce new power strips, outlets and switches in 2017. SCE also proposes smart or connected lighting, which use sensors, microprocessors and controllable switches or relays that offer automated control functionality (such as scheduling, occupancy control, and daylight harvesting) into traditional lighting solutions. SCE also proposes smart or connected appliances, which have the capability to receive, interpret and act on a signal received from a utility, third party energy service provider or home energy management device, and automatically adjust their operations depending on both the signal's contents and settings from the. SCE's final proposed offering is a suite of connected whole home bundles, which is a combination of software, hardware, and embedded cloud systems to create a turnkey smart home solution that manages interactions between existing smart hardware and allows customers to manage the actions of connected devices.

### SoCalGas' AB 793 Offerings

SoCalGas' AB 793 AL 5003-G and supplemental 5003-G-A propose a multi-measure that requires the home owner to incorporate at minimum three categories of smart energy management technologies that encourage both electric

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SCE AL 3446-E-A, SCE AL 3446-E-B, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-A.  
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and gas savings as well as water savings. In addition, customers will need to download a mobile/web application that will allow them to track and monitor their usage. Finally, SoCalGas proposes a commercial lodging program that will encourage and assist medium commercial hotel owners to incorporate energy management technology while also improving their overall building performance with existing measures and optimizing their energy usage. This program's incentives will be based on a metered approach to calculating savings or a co-payment equal to a percentage of the investment in energy management system purchased.

### SDG&E's AB 793 Offerings

SDG&E AB 793 AL 2937-E/2500-G and supplemental 2937-E-A/2500-G-A plans on initially offering a smart thermostat rebate of \$50 on qualifying smart thermostats. SDG&E also proposes a rebate for customers who own a smart thermostat who enroll in TOU rate pilots. Finally, SD&E is reviewing its Innovative Designs for Energy Efficiency Activities (IDEEA) 365 proposals that can provide EMT that will meet the AB 793 requirements for residential customers.

For 2017, SDG&E proposes to launch a small commercial energy management pilot, which would provide participants an incentive payment to help offset the cost of acquiring either software or a cloud based application that captures all their energy usage and matches the usage with the effect of a TOU rate so that the customer can get a better understanding of the cost of running the energy portion of their business. SDG&E also proposes offering a number of other products, such as smart thermostats, rebates for integrating lighting technology with WI-FI connectivity and smart HVAC zoning systems, which provide room by room temperature controls.

### AB 793 Joint and Local Marketing Plans

SoCalGas AL 5012 and supplemental AL 5012-A included the IOUs' joint AB 793 marketing plans. In addition, PG&E 3744-G-B/4886-E-B, SDG&E 2937-E-B/2500-G-B, and SoCalGas 5003-G-B were filed as partial supplemental ALs on September 20, 2016. Those included the utilities' local marketing plans. On



PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SCE AL 3446-E-A, SCE AL 3446-E-B, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-A.  
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September 27, 2016 SCE filed partial supplemental 3446-E-B, which included its local marketing plan.

The joint marketing plans include assumptions about the direction in which the marketplace for EMTs is headed in the state and current market barriers for EMTs that the joint plan seeks to overcome. In addition, the plans put forward a statewide approach to marketing EMTs that includes approaches, goals, objectives and how best to target the residential, low income and SMB customer market segments. The plans include approaches to integrate with the statewide marketing effort under Energy Upgrade California, coordination with residential rate reform, and metrics and performance indicators on how the IOUs could evaluate the statewide efforts' success in encouraging the adoption of EMTs. In addition to the joint IOU marketing plan, each IOU also included local marketing and outreach plans to be used in its unique service territory. These localized plans take into consideration differing geographic considerations, customer market segments and makeup, the local media landscape, climate differences and current EMT penetration.

## **NOTICE**

Notices of AB 793 ALs were made by publication in the Commission's Daily Calendar. The IOUs state that a copy of the AB 793 ALs were mailed and distributed in accordance with Section 4 of General Order 96-B.

## **PROTESTS**

Mission:data timely filed a protest to all of the AB 793 ALs on August 29, 2016. On September 6, 2016, PG&E, SCE, SoCalGas, and SDG&E all timely filed replies to the Mission:data protest.

### **Mission:data's Protest**

Mission:data protested all of the AB 793 ALs stating the "basis and subject matter for the protest is the same for each of the IOUs' AB 793 ALs."<sup>2</sup> Mission:data

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<sup>2</sup> Mission:data Protest to AB 793 ALs, p. 1.

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SCE AL 3446-E-A, SCE AL 3446-E-B, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-A.  
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believes the AB 793 ALs: 1) do not adequately consider or promote offerings that empower consumers with their own usage data made available by Advanced Metering Infrastructure (AMI); 2) fail to adequately collaborate with third parties or animate the market for data driven technologies; 3) continue to rely on workpapers for savings estimates rather than embracing the use of metered savings and Pay-for-Performance models; and 4) the marketing metrics should emphasize energy savings achievements and EMT adoption.<sup>3</sup>

1. First, Mission:data notes that on June 24, 2016 Energy Division hosted a workshop in which third parties presented a wide array of currently-available technologies, that met the intent of AB 793. Products included disaggregation software that leverages the Home Area Network<sup>4</sup> (HAN) interface and Green Button Connect<sup>5</sup>, DR providers and energy management products – a number of which have been offered successfully by other local governments and utilities.<sup>6</sup> Despite the workshop, Mission:data believes the AB 793 ALs did not include the required list of “all EMT programs and offerings that meet the objectives of Section 717 of AB 793” or necessary information, such as timelines for deployment, incentive levels or any detail on how to scale the programs.<sup>7</sup> Additionally, Mission:data claims that the original intent of the bill was to incent HAN devices, which weren’t included in any of AB 793 ALs, and that the AB 793 ALs also overlooked Green Button Connect enabled software and services provided by third parties.<sup>8</sup>

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<sup>3</sup> Ibid.

<sup>4</sup> HAN devices allow homeowners to see how much energy they are using in near real-time by end use and help identify high energy use appliances.

<sup>5</sup> Green Button was a White House initiative to provide utility customers with easy and secure access to their energy usage information in a customer-friendly format. Customers are able to securely download their own detailed energy usage with a simple click of the "Green Button" on electric utilities' websites.

<sup>6</sup> Mission:data Protest to AB 793 ALs, p. 5.

<sup>7</sup> Ibid.

<sup>8</sup> Mission:data Protest to AB 793 ALs, p. 6.

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SCE AL 3446-E-A, SCE AL 3446-E-B, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-A.  
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Mission:data requests that the AB 793 ALs both incent and market a significant variety of third party offerings using HAN and Green Button Connect data for residential and SMB markets.<sup>9</sup>

2. Second, Mission:data highlights that the AB 793 legislation directs the IOUs to work with third parties and other stakeholders in developing their product and marketing implementation plans.<sup>10</sup> However, with the exception of PG&E, the protesting party is concerned that outreach by IOUs to third parties and other stakeholders was minimal. Thus they believe that the IOUs plans overlooked opportunities to creatively expand use of EMTs.<sup>11</sup>

Mission:data requests that the IOUs are directed to consult with third parties, with the objective of ensuring that incentive programs give consumers a robust array of third party energy management software and hardware offerings and have a focus on enabling and growing the existing market for EMTs. An additional suggestion Mission:data offers is for the IOUs to support online marketplaces where consumers can choose from an array of products, software and services – not unlike the Apple or Google Play app stores that list products with consumer reviews and enable consumer choice.<sup>12</sup>

3. The third grounds for Mission:data's protest is their concern that the current AB 793 ALs rely too heavily on workpapers as the basis for claiming savings and establishing incentives. They add that the development of workpapers is costly, time consuming, difficult to get approved and not necessarily well-suited for AMI-enabled software solutions that are updated frequently.<sup>13</sup> Mission:data requests that

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<sup>9</sup> Mission:data Protest to AB 793 ALs p. 8.

<sup>10</sup> AB 793, Section 717 (a) (1) Available at:

[http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill\\_id=201520160AB793](http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160AB793)

<sup>11</sup> Mission:data Protest to AB 793 ALs, p. 6.

<sup>12</sup> Ibid.

<sup>13</sup> Mission:data Protest to AB 793 ALs p. 6.

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SCE AL 3446-E-A, SCE AL 3446-E-B, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-A.  
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flexibility should be provided for new products that offer promise so that the AB 793 ALs include a robust array of offerings capable of leveraging AMI.<sup>14</sup> They add that the Commission has “encouraged Pay-for-Performance contracts where savings are measured at the meter and risk can be shared by the customer, implementer and IOUs and not solely rely on ratepayer funding.”<sup>15</sup> This model, they add, mitigates the risk of the up-front incentive exceeding the value of the actual savings, which they contend the AB 793 ALs does not substantially embrace.<sup>16</sup>

4. Finally, while Mission:data supports many of the metrics for success included in the AB 793 ALs marketing plan, they believe that two key metrics should be added: 1) measuring resulting energy savings; and 2) measuring actual consumer adoption and use of technologies.<sup>17</sup>

#### IOU Replies to the Mission:data Protest

PG&E, SCE, SoCalGas and SDG&E all filed replies to the Mission:data protest. Each of the IOUs responded to the four grounds for protest that Mission:data raised.

1. The first grounds for the protest raised by Mission:data is that “the plans do not adequately consider or promote offerings that empower consumers with their own usage data made available by AMI.”<sup>18</sup>

All of the IOUs disagree with Mission:data’s claim and believe they leverage AMI through offerings in their AB 793 ALs and current EE and DR portfolios. PG&E claims they are currently leveraging California’s AMI capabilities in a number of ways to help customers understand and

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<sup>14</sup> Mission:data Protest to AB 793 ALs p. 9.

<sup>15</sup> Mission:data Protest to AB 793 ALs pp. 6-7.

<sup>16</sup> Mission:data Protest to AB 793 ALs p. 7.

<sup>17</sup> Mission:data Protest to AB 793 ALs p. 7.

<sup>18</sup> Mission:data Protest of IOUs p. 5.

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SCE AL 3446-E-A, SCE AL 3446-E-B, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-A.  
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manage their energy use, and they claim this will become more prevalent in coming years (see PG&E's examples in footnote).<sup>19</sup> PG&E agrees with Mission:data on HAN devices and claims they support HAN devices at a mass market scale, but note that HAN devices have low adoption rates.<sup>20</sup>

SCE also claims the Mission:data assertion overlooks some of their offerings that leverage AMI data. They claim that their Peak Time Rebate – Enabling Technology – Direct Load Control program or PTR-ET-DLC program offers incentives for saving energy based on actual metered usage from the customer's smart meter.<sup>21</sup> In addition, several of the tools that SCE identified in their AB 793 ALs also help customers better understand their energy usage and rely on data from the customer's smart meter.<sup>22</sup> SoCalGas replied that they currently offer real time energy consumption information to SoCalGas customers through their online energy management tools that show hourly gas usage through AMI, and provide bill analytics to help customers understand changes in their energy usage.<sup>23</sup> They add that they are also currently evaluating Green Button Connect my data.<sup>24</sup> SDG&E states they currently utilize AMI data for behavioral home energy reports.<sup>25</sup>

2. Mission: data also claims the AB 793 ALs “fail to adequately collaborate with third parties or animate the market for data driven technologies,”<sup>26</sup> as

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<sup>19</sup> PG&E's cites their residential programs that utilize AMI data as: Energy Alerts, Bill Forecast Alerts, and Behavioral Demand Response offerings. Customers can also directly access their real time data directly from their SmartMeter through the Stream My Data platform and/or receive data and information from third party vendors through the Share My Data platform. Stream My Data and Share My Data also allow PG&E customers to share their energy usage information to third parties.

<sup>20</sup> Ibid.

<sup>21</sup> SCE Reply to Mission:data Protest p. 1.

<sup>22</sup> SCE Reply to Mission:data Protest p. 2.

<sup>23</sup> SoCalGas Reply to Mission:data Protest p. 2.

<sup>24</sup> Ibid.

<sup>25</sup> SDG&E Reply to Mission:data Protest p. 2.

<sup>26</sup> Mission:data Protest to AB 793 ALs, p. 1.

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SCE AL 3446-E-A, SCE AL 3446-E-B, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-A.  
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the legislation required. Again, all the IOUs disagree with the Mission:data protest. PG&E notes that there are many venues for third party vendors to collaborate with the IOUs, including Innovative Design for Energy Efficiency Approaches (IDEEA) 365 solicitation, and/or other EE solicitations in 2017 and beyond.<sup>27</sup> In addition, they also cite the Emerging Technologies (ET) Technology Resource Innovation Program (TRIP) solicitation and the Emerging Technologies Coordinating Council (ETCC).<sup>28</sup> They add that all of the IOUs also presented their draft AB 793 plan at the July 13, 2016 California Energy Efficiency Coordinating Council (CAEECC) meeting and suggest that Mission:data participate in CAEECC to learn about future portfolios and how the IOUs are broadening EMT offerings and Pay-for-Performance, as part of their Business Plan process.<sup>29</sup>

SCE also believes that they have closely collaborated with third parties in an attempt to stimulate the EMT market. SCE states that they expanded their PTR-ET-DLC program by collaborating with SoCalGas, numerous third-party smart thermostat providers, and major retailers to provide incentives to customers who install a qualifying smart thermostat and register in the PTR-ET-DLC program.<sup>30</sup> SCE also claims to have engaged in discussions with some of the third parties who attended the June 24, 2016, Energy Division led AB 793 workshop.<sup>31</sup> SoCalGas asserts that they will continue to consult with third party vendors and other stakeholders during the development of the AB 793 Scope of Work prior to the issuance of RFPs. SoCalGas also states that they will be partnering with local agencies and other energy utilities to implement a comprehensive program

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<sup>27</sup> PG&E Reply to Mission:data Protest p. 3.

<sup>28</sup> Ibid.

<sup>29</sup> Ibid.

<sup>30</sup> SCE Reply to Mission:data Protest p. 2.

<sup>31</sup> Ibid.

and hopes to further leverage the vendor relationships that municipal and other utilities have developed.<sup>32</sup> SDG&E claims third parties are free to market their own products and services that meet SDG&E's program requirements directly to customers.<sup>33</sup>

3. Mission:data argues that the AB 793 ALs continue to rely on workpapers for savings estimates rather than embracing use of metered savings and Pay-for-Performance models. In response, SoCalGas notes that their AB 793 AL proposes a Commercial EMT Lodging (CEMTL) program that utilizes a hybrid incentive structure, which includes a post measurement incentive of \$1.50/therm after 12 months of normalized metered energy savings, capped at a maximum of 50% of the incremental project cost.<sup>34</sup> SoCalGas adds that they will continue to emphasize Pay-for-Performance approaches in their solicitation process for selecting third party vendors for the implementation of EE programs.<sup>35</sup>

While PG&E, SCE and SDG&E all state that where opportunities exist and it makes sense, they will rely on metered energy savings and Pay-for-Performance models.<sup>36</sup> However, where savings can be reliably calculated for technologies the IOUs agree that a deemed methodology for setting rebates and establishing claimable savings levels may be preferable and has been the foundation for EE programs.<sup>37</sup>

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<sup>32</sup> SoCalGas Reply to Mission:data Protest p. 2.

<sup>33</sup> SDG&E Reply to Mission:data Protest p. 3.

<sup>34</sup> SoCalGas Reply to Mission:data Protest pp. 3-4.

<sup>35</sup> SoCalGas Reply to Mission:data Protest p. 4.

<sup>36</sup> PG&E Reply to Mission:data Protest p. 9; SCE Reply to Mission:data Protest p. 4; and SDG&E Reply to Mission:data Protest p. 3.

<sup>37</sup> PG&E Reply to Mission:data Protest p. 9; SCE Reply to Mission:data Protest p. 4; and SDG&E Reply to Mission:data Protest p. 3.

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SCE AL 3446-E-A, SCE AL 3446-E-B, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-A.  
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4. Mission:data's final grounds for protest is that the "Marketing plans metrics should target actual energy savings and EMT adoption." All of the IOUs replied that they are already in the process of upgrading their key metrics and performance indicators through supplemental ALs that they did eventually submit on September 16, 2016.

SoCalGas and SDG&E disagree with Mission:data that ME&O success metrics should be strictly tied to either energy savings or EMT adoption. They believe doing so fails to consider other key factors, such as program offerings/makeup, customer experience and unique customer situations and needs.<sup>38</sup> SDG&E and SoCalGas claim the Mission:data proposed metrics risk oversimplifying the challenge of effectively promoting AB 793 incentive offerings by judging success exclusively on energy savings and technology adoption from the beginning. In their supplemental advice letter filings, SDG&E and SoCalGas claim they will propose metrics that more accurately gauge the success of AB 793 ME&O efforts and will offer constructive insight into possible improvements and modifications.<sup>39</sup>

## **DISCUSSION**

In reviewing the AB 793 ALs for reasonableness, the Commission considered the protest from Mission:data, the replies to the protest from the IOUs, and Commission staff's analysis of whether the AB 793 ALs met the intent of the AB 793 legislation. The discussion will be organized around the Mission:data protest.

### **1. The AB 793 ALs should consider or promote more offerings that empower consumers with their own usage data made available by AMI**

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<sup>38</sup> SoCalGas Reply to Mission:data Protest p. 5, SDG&E Reply to Mission:data Protest p. 3.

<sup>39</sup> SoCalGas Reply to Mission:data Protest p. 5, SDG&E Reply to Mission:data Protest p. 3.



PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SCE AL 3446-E-A, SCE AL 3446-E-B, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-A.  
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The Commission agrees with Mission:data that a major objective of the AB 793 legislation is to encourage the IOUs to include in their portfolios additional EMTs that utilize AMI data to allow customers to better understand and manage their energy usage. The Commission believes the IOUs AB 793 ALs and their responses to the protest point primarily to a few current and potential programs, and fails to promote more cutting edge EMTs.

Thus we direct the IOUs to modify their programs to include a HAN rebate pilot by the 2<sup>nd</sup> Quarter of 2017, including promotional activities designed to educate consumers about how they can benefit from HAN devices. The utilities shall also provide customers easy access to a choice of options of energy management applications they can download to their HAN device.

**2. The AB 793 ALs should promote collaboration with third parties to animate the market for data driven technologies**

The Commission finds Mission:data's second grounds for protest troubling given the legislative requirement in AB 793 for the IOUs to collaborate with third parties. Energy Division held a workshop on June 24, 2016 at the Commission with the intent of fostering relationships with the IOUs' and third parties in the development of product offerings for the IOUs' AB 793 filings.

While we agree with PG&E that there are a number of venues for third parties to participate to influence the IOUs current and future EMT offerings including IDEEA 365 solicitations, TRIP, ETCC and CAEECC. We are concerned that Mission:data and many of the third parties have limited resources to track and participate in all of these forums. Thus we encourage Energy Division staff to consider convening an AB 793 working group with third parties and the IOUs to meet regularly with the purpose of streamlining the number of organizations the third parties would have to monitor, while also keeping them aware of, and engaged in, the various opportunities for their participation in the implementation of the AB 793 offerings.

**3. The AB 793 ALs continue to rely on workpapers for savings estimation rather than embracing use of metered savings and Pay-for-Performance models**

Where sufficient data exist that deemed savings can be estimated with a reasonable degree of accuracy, we believe savings claims should be based on approved workpapers. But it appears that the IOUs and Mission:data agree that some products might not be ideal for the workpaper process and may make more sense to rely on a Pay-for-Performance model based on metered energy savings.

The Commission agrees with Mission:data that the current AB 793 ALs offerings rely too heavily on the workpaper process and many EMTs are not well suited for deemed savings based on workpapers. Thus, we direct the IOUs to include the following Pay-for-Performance pilots in their AB 793 Compliance ALs:

1. SCE, SDG&E and SoCalGal are required to launch residential Pay-for-Performance pilots by the 2<sup>nd</sup> Quarter of 2017. All Pay-for-Performance pilots must explicitly welcome participation by EMT vendors and products including energy management software-as-a-service. The Pay-for-Performance pilots should also not rely exclusively on whole building retrofit activities, as the intent of AB 793 is not to stimulate EE whole building retrofit activities.
2. SCE and SDG&E are required to launch SMB Pay-for-Performance pilots by the 3<sup>rd</sup> Quarter of 2017. All SMB Pay-for-Performance pilots must explicitly welcome participation by EMT vendors and products, including energy management software-as-a-service. The Pay-for-Performance pilots should not rely exclusively on whole building retrofit activities, as the intent of AB 793 is not to stimulate whole building EE retrofit activities.

On January 17, 2017, the IOUs submitted their EE Business Plans for 2018 and the new ten year rolling portfolio cycle without direction on what type of AB 793 offering would be directed in this Resolution, such as requiring all the IOUs to launch Pay-for-Performance pilots in 2017. However, despite the disconnect in timing with the Business Plan approval process and this Resolution, we expect

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SCE AL 3446-E-A, SCE AL 3446-E-B, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-A.  
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that the IOUs will integrate the Pay-for-Performance pilots and all other AB 793 EE related offerings in this Resolution into their EE portfolios and be able to allocate sufficient funding sources to AB 793 offerings.

Additionally, Mission:data points out, developing workpapers is costly and entails a lengthy process to review.<sup>40</sup> The Commission is concerned that a significant portion of the IOUs' AB 793 product offerings will be delayed if they are done only after the approval of cost-effective workpapers.

Thus the IOUs shall propose in their AB 793 filings, when technologically appropriate, to utilize normalized metered energy consumption or randomized control trials or other experimental designs, instead of relying on the workpaper process. This is especially true for energy software as a service and other EMT offerings, which aren't particularly well suited for the workpaper process and deemed savings. As metered data becomes increasingly available over time, it will make it possible for utilities and others to analyze actual energy and bill savings rather than making estimates. The use of normalized metered energy data is also consistent with the intent of other recent California energy efficiency legislation. In cases where it's not possible to rely on metered data for savings attribution the utilities, after consultation with Energy Division, may determine to proceed with the workpaper review and approval process for an AB 793 offering. Additionally, the IOUs may rely on approved workpapers for AB 793 offerings for which deemed savings may be accurately predicted across climate zones and building stocks.

#### **4. The AB 793 ALs marketing plans metrics**

Mission:data supports many of the metrics for success included in the marketing plan but believes that two key metrics should be added: 1) measuring resulting energy savings and 2) measuring actual consumer adoption and use of technologies.

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<sup>40</sup> Mission:data Protest to AB 793 ALs p. 5.

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SCE AL 3446-E-A, SCE AL 3446-E-B, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-A.  
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The IOUs replied that they are already in the process of upgrading their key marketing metrics and performance indicators as a result of supplemental marketing ALs that they submitted on September 16, 2016.

On September 16, 2016 the IOUs refiled their joint AB 793 marketing plan and individual local marketing plans as supplementals PG&E 3744-G-B/4886-B, SDG&E 2937-E-B/2500-G-B, SoCalGas 5003-G-B and SoCalGas supplemental AL 5012-A (the statewide marketing plan). No protests or comments were submitted disapproving of any of the refiled AB 793 marketing plans. The Commission staff reviewed the AB 793 marketing plans and believes they provided sufficient detail, appropriate metrics upon which the success of the marketing plans could be evaluated and a reasonable initial marketing roll out plan and roadmap going forward. However, the marketing plans need to include new offerings, targets and timelines as directed in this Resolution. Therefore the IOUs shall update their marketing plans and file as Tier 1 ALs within 30 days after the approval of this Resolution.

### **5. Integration of AB 793 offerings into the EE Rolling Portfolio Cycle**

The IOUs submitted their EE Business Plans for the new ten year rolling portfolio cycle on January 17, 2017, without the benefit of the requirements set forth in this Resolution. Despite this disconnect in timing, we expect that the IOUs will be able to integrate the EE-related AB 793 offerings directed by this Resolution into their EE portfolios, given the high level nature of the Business Plans, the program and budget flexibility associated with the rolling portfolio cycle, and the fact that Implementation Plans will not be developed until the Business Plans are approved by the Commission.

### **COMMENTS**

Public Utilities Code section 311(g)(1) provides that this Resolution must be served on all parties and subject to at least 30 days public review and comment prior to a vote of the Commission. Section 311(g)(2) provides that this 30-day period may be reduced or waived upon the stipulation of all parties in the proceeding.

The 30-day comment period for the draft of this Resolution was neither waived nor reduced. Accordingly, this draft Resolution was mailed to parties for comments, and will be placed on the Commission's agenda no earlier than 30 days from today.

## **FINDINGS**

1. On August 1, 2016, PG&E filed AL 3744-G/4886-E, SDG&E filed AL 2937-E/2500-G, SCE filed AL 3446-E and SoCalGas filed AL 5003-G requesting approval of their ALs to comply with the requirements of the AB 793 legislation. Upon Request from Commission staff, the IOUs filed supplemental AB 793 ALs on dates ranging from August 5 - 11, 2016, and SoCalGas AL 5012-A, which included the IOUs statewide marketing plans for AB 793. Again Commission staff requested more supplemental filings, and in response the IOUs filed partial supplemental ALs which separated their product offering from local marketing plans on dates ranging from August 20-27, 2016, and a supplemental to AL 5012-A.
2. It is reasonable to require each of the IOUs to refile their product implementation ALs within 30 days of the approval of this Resolution as Tier 2 ALs to update the product implementation plans to include the Commission directed modifications to the product offerings included in the Ordering Paragraphs. The product implementation-related ALs are: PG&E's AL 3744-G-A/4886-E-A, SDG&E's AL 2937-E-A/2500-G-A, SCE's 3446-E-A and SoCalGas' AL 5003-G-A.
3. The AB 793 legislation was signed into law by the Governor on October 8, 2015. AB 793 directed the IOUs to develop a program in their demand side management portfolios to provide incentives to residential and SMB customers to acquire EMTs by January 1, 2017. AB 793 also required the IOUs to develop a plan by September 30, 2016 to educate residential and SMB customers about incentives for EMT offerings available to them.

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SCE AL 3446-E-A, SCE AL 3446-E-B, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-A.  
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4. The AB 793 ALs were protested by Mission:data on August 29, 2016, as Mission:data believes the AB 793 ALs failed to live up to the intent of the AB 793 legislation.
5. It is reasonable to require each of the IOUs to refile their marketing-related ALs within 30 days of the approval of this Resolution as Tier 1 ALs to update the plans to include new offerings, targets and timelines directed in modifications for the AB 793 ALs. The marketing-related ALs are: PG&E 3744-G-B/4886-E-B, SDG&E 2937-E-B/2500-G-B, SCE 3446-E-B, SoCalGas 5003-G-B and supplemental AL 5012-A.

**THEREFORE IT IS ORDERED THAT:**

1. The AB 793 supplemental advice letters Pacific Gas & Electric AL 3744-G-A/4886-E-A, San Diego Gas & Electric AL 2937-E-A/2500-G-A, Southern California Edison AL 3446-E-A and Southern California Gas AL 5003-G-A are approved with the modifications as described in this Resolution. Pacific Gas & Electric, San Diego Gas & Electric, Southern California Edison and Southern California Gas must file a Tier 2 AL to demonstrate compliance with the Commission directed modifications within 30 days of the approval of this Resolution.

It is reasonable to adopt AB 793 ALs with the following modifications:

- a. Pacific Gas & Electric, San Diego Gas & Electric, Southern California Edison and Southern California Gas shall offer a Home Area Network rebate pilot by the 2<sup>nd</sup> Quarter of 2017, including promotional activities designed to educate consumers about how they can benefit from Home Area Network devices. Pacific Gas & Electric, San Diego Gas & Electric, Southern California Edison and Southern California Gas shall also provide customers easy access to a choice of options of energy management applications they can download to their Home Area Network devices.

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SCE AL 3446-E-A, SCE AL 3446-E-B, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-A.  
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- b. Pacific Gas & Electric, San Diego Gas & Electric, Southern California Edison and Southern California Gas shall update their energy efficiency marketplaces on their websites to include all measures that are relevant to AB 793.
- c. San Diego Gas & Electric, Southern California Edison and Southern California Gas are required to launch residential Pay-for-Performance pilots by the 2<sup>nd</sup> Quarter of 2017. All Pay-for-Performance pilots must explicitly welcome participation by energy management technology vendors and products, including energy management software-as-a-service. The Pay-for-Performance pilots should not rely exclusively on retrofits, as the intent of AB 793 is not to stimulate energy efficiency retrofit activities.
- d. Southern California Edison and San Diego Gas & Electric are required to launch small and medium business Pay-for-Performance pilots by the 3<sup>rd</sup> Quarter of 2017. All small and medium business Pay-for-Performance pilots must explicitly welcome participation by energy management technology vendors and products, including energy management software-as-a-service. The Pay-for-Performance pilots should not rely exclusively on retrofits, as the intent of AB 793 is not to stimulate energy efficiency retrofit activities.
- f. Where feasible Pacific Gas & Electric, San Diego Gas & Electric, Southern California Edison and Southern California Gas shall utilize normalized metered energy consumption, randomized control trials, or other experimental designs, instead of relying on the workpaper process. This is especially true for energy software-as-a-service and other energy management technology offerings, which aren't particularly well suited for the workpaper process and deemed savings. In cases where the utilities already have advanced or completed workpaper review and approval processes for AB 793 products, the utilities may continue to rely on the workpaper process when deemed savings can be accurately predicted across climate zones and building stocks.

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SCE AL 3446-E-A, SCE AL 3446-E-B, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-A.  
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2. The following marketing AB 793 ALs are approved contingent on implementation of the marketing-related modifications described in ordering paragraph 1 above: Pacific Gas & Electric's partial supplemental AL 3744-G-B/4886-E-B, San Diego Gas & Electric's partial supplemental AL 2937-E-B/2500-G-B, Southern California Edison's partial supplemental AL 3446-E-B and Southern California Gas' partial supplemental AL 5003-G-B and supplemental AL 5012-A. The marketing plans shall be refiled as Tier 1 ALs 30 days after the approval of this Resolution to update the plans to include new product offerings, and timelines directed in this Resolution.

This Resolution is effective today.

I certify that the foregoing Resolution was duly introduced, passed and adopted at a conference of the Public Utilities Commission of the State of California held on March 2, 2017; the following Commissioners voting favorably thereon:

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TIMOTHY J. SULLIVAN  
Executive Director